

Functions, Statistics, & Trigonometry – Grades 11-12
District 2853

Month	Content	Performance Standards Addressed Grades 9-11 Grades 11-12	Skills for Student Achievement	Assessment	
September	Exploring Data	Mathematical Reasoning - Benchmarks #1, #2 Computation & Operation - Benchmark #6 Data and Statistics - Benchmarks #1, #2, #4	Statistics - Benchmark #3	<ul style="list-style-type: none"> · Read, interpret, & construct displays and graphs · Calculate and compare measures of center and measures of spread 	
October and November	Functions and Models	Mathematical Reasoning - Benchmarks #1, #2, #4, Computation & Operation - Benchmarks #2, #5, #6 Patterns and Functions - Benchmarks #1, #2, #4, #5 Algebra - Benchmarks #3, #5, #6, #7, #8 Data and Statistics - Benchmarks #3, #5, #6	Algebra - Benchmarks #1, #2, #5, #6, #7, #11	<ul style="list-style-type: none"> · Identify the domain, range, and properties of functions · Model data to represent real world situations and make predictions · Determine the best fitting line or curve (regression equations) 	
November and December	Transformations of Graphs and Data	Mathematical Reasoning - Benchmarks #1, #2, #3 Computation & Operation - Benchmarks #4, #5 Patterns and Functions - Benchmark #3 Geometry - Benchmark #6	Algebra - Benchmark #15	<ul style="list-style-type: none"> · Describe the effects of transformations (translations and scale changes) on functions and their graphs · Use transformations to analyze data · Describe and determine symmetries of graphs · Find formulas and values of composites of functions · Find and graph inverses of functions 	
January and February	Circular Functions	Mathematical Reasoning - Benchmarks #1, #2 Computation & Operation - Benchmarks #2,	Trigonometry & Geometry - Benchmarks #3, #6, #7	<ul style="list-style-type: none"> · Find lengths of circular arcs and areas of sectors · Find sines, cosines, and tangents of angles · Use and verify 	

		#3		<ul style="list-style-type: none"> trigonometric identities Identify the amplitude, period, frequency, and other properties of circular functions Graph transformation images of circular functions 	
March and April	<ul style="list-style-type: none"> Trigonometry Functions 	<p>Mathematical Reasoning</p> <ul style="list-style-type: none"> - Benchmarks #1, #2 <p>Computation & Operation</p> <ul style="list-style-type: none"> - Benchmark #4 <p>Geometry</p> <ul style="list-style-type: none"> - Benchmark #4 	<p>Algebra</p> <ul style="list-style-type: none"> - Benchmark #15 <p>Trigonometry & Geometry</p> <ul style="list-style-type: none"> - Benchmarks #1, #2, #4, #5, #8, #9 	<ul style="list-style-type: none"> Solve problems using trigonometric ratios in right triangles Solve problems involving the Law of Cosines and the Law of Sines Use inverse trigonometric functions to solve equations and model situations Write and solve general trigonometric equations Compute probabilities using counting techniques 	
April and May	<ul style="list-style-type: none"> Probability and Simulation 	<p>Probability</p> <ul style="list-style-type: none"> - Benchmarks #1, #2, #3, #4, #5, #6 		<ul style="list-style-type: none"> Determine whether events are mutually exclusive, independent, or complementary Design and conduct simulations 	
May	<ul style="list-style-type: none"> Sequences, Series, and Combinations 		<p>Algebra</p> <ul style="list-style-type: none"> - Benchmark #16 	<ul style="list-style-type: none"> Find formulas for sequences and determine limits Solve problems involving arithmetic, geometric, and infinite series Use combinations to compute the number of ways of selecting objects 	